

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 39, 40, 42, 44, 50, 51, 53, 58, 59, 61 and 62; AMEND claims 28 and 30; and ADD new claims 63-76 in accordance with the following:

Claims 1-27 (cancelled)

28. (currently amended) A method for encoding a digital message on a computer, the method comprising:

encoding the digital message by a first application executing on the computer to form an encoded message via employment of an encoding format of a network protocol;

subjecting the encoded message, not a decoded message obtained from the encoded message, to at least one cryptographic process in a proxy agent application executing on the computer to form a cryptographically processed message; and

encoding the cryptographically processed message via employment of the encoding format of the network protocol.

29. (previously presented) A method for decoding at a computer an encoded, cryptographically processed message that is present in an encoding format of a network protocol, the method comprising:

decoding at the computer the encoded, cryptographically processed message according to the encoding format of the network protocol to form a decoded, cryptographically processed message;

subjecting the decoded, cryptographically processed message to a second cryptographic process inverse relative to at least one first cryptographic process by a proxy agent application executing on the computer, which previously encoded an original digital message, to form an inversely cryptographically processed message; and

decoding the inversely cryptographically processed message by another application executing on the computer according to the encoding format of the network protocol used in said decoding of the cryptographically processed message.

30. (currently amended) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message, the method comprising:

- encoding the digital message, by a first application in the first computer unit, to form an encoded message via employment of an encoding format of the network protocol;

- subjecting the encoded message, not a decoded message obtained from the encoded message, by a first proxy agent in the first computer unit, to at least one first cryptographic process to form a cryptographically processed message;

- encoding the cryptographically processed message, in the first computer unit, via employment of the encoding format of the network protocol used to produce the encoded message to form an encoded, cryptographically processed message;

- transmitting the encoded, cryptographically processed message from the first computer unit to the second computer unit;

- decoding the encoded, cryptographically processed message, in the second computer unit, according to the encoding format of the network protocol to form a decoded, cryptographically processed message;

- subjecting the decoded, cryptographically processed message, by a second proxy agent in the second computer unit, to a second cryptographic process inverse relative to the at least one first cryptographic process to form an inversely cryptographically processed message; and

- decoding the inversely cryptographically processed message, by a second application in the second computer unit, into the digital message according to the encoding format of the network protocol.

31. (previously presented) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message as claimed in claim 30, further comprising:

- including a request for implementing a prescribable action in the digital message;

- implementing the prescribable action in the second computer unit to obtain a result of the prescribable action; and

- sending the result of the prescribable action from the second computer unit to the first computer unit in a reply message.

32. (previously presented) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message as claimed in claim 30, further comprising:

- including a request for implementing a prescribable action in the digital message;
- implementing the prescribable action in the second computer unit to obtain a result of the prescribable action;
- forming a reply message which contains the result of the prescribable action in the second computer unit;
- encoding the reply message in the second computer unit according to the encoding format of the network protocol to form an encoded reply message;
- subjecting the encoded reply message to at least one cryptographic process in the second computer unit to form a cryptographically processed reply message;
- storing the cryptographically processed reply message in the second computer unit;
- encoding a fetch message in the first computer unit according to the encoding format of the network protocol, wherein the cryptographically processed reply message is requested from the second computer unit with the fetch message;
- transmitting the fetch message from the first computer unit to the second computer unit;
- receiving the fetch message by the second computer unit;
- encoding the cryptographically processed reply message according to the encoding format of the network protocol to form an encoded, cryptographically processed reply message;
- and
- transmitting the encoded, cryptographically processed reply message from the second computer unit to the first computer unit.

33. (previously presented) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message as claimed in claim 30, the method further comprising:

- including a request for implementing a prescribable action in the digital message;
- implementing the prescribable action in the second computer unit to obtain a result of the prescribable action;
- forming a reply message which contains the result of the prescribable action in the second computer unit;
- encoding the reply message in the second computer unit according to the encoding format of the network protocol to form an encoded reply message;

subjecting the encoded reply message to at least one cryptographic process in the second computer unit to form a cryptographically processed reply message;

encoding the cryptographically processed reply message according to the encoding format of the network protocol to form an encoded, cryptographically processed reply message; and

transmitting the encoded, cryptographically processed reply message from the second computer unit to the first computer unit.

34. (previously presented) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message as claimed in claim 33, wherein the cryptographically processed reply message is stored in a management information base in the second computer unit.

35. (previously presented) A method for encoding a digital message as claimed in claim 28, wherein the network protocol is a simple network management protocol version 1.

36. (previously presented) A method for encoding a digital message as claimed in claim 35, further comprising:

forming a set request in the first computer unit upon encoding the cryptographically processed message; and

transmitting the set request from the first computer unit to the second computer unit.

37. (previously presented) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message as claimed in claim 32, further comprising:

employing a get request as the fetch message; and

forming a get response upon the encoding of the requested, cryptographically processed reply message.

38. (previously presented) A method for encoding a digital message, for transmitting the digital message from a first computer unit to a second computer unit and for decoding the digital message as claimed in claim 31, further comprising:

transmitting as the prescribable action at least one of an information query and an information indication of the second computer unit.

Claims 39 and 40 (cancelled)

41. (currently amended) An apparatus for encoding, transmitting and decoding a digital message, comprising:

a first computer unit, including means for encoding the digital message via employment of an encoding format of a network protocol by a first application to form an encoded message, means for cryptographically processing the encoded message by a first proxy agent, without decoding the encoded message, to form a cryptographically processed message, means for encoding the cryptographically processed message via employment of the encoding format of the network protocol to form an encoded, cryptographically processed message, and means for sending the encoded cryptographically processed message from the first computer unit to the second computer unit; and

a second computer unit, including means for receiving the encoded cryptographically processed message from the first computer unit, means for decoding the encoded cryptographically processed message according to the encoding format of the network protocol to form a decoded cryptographically processed message, means for inversely cryptographically processing the decoded cryptographically processed message by a second proxy agent to form an inversely cryptographically processed message, and means for decoding the inversely cryptographically processed message by a second application according to the encoding format of the network protocol.

42. (cancelled)

43. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the means for encoding the digital message is further provided as the means for encoding the cryptographically processed message.

44. (cancelled)

45. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the means for decoding the encoded, cryptographically processed message is further provided as the means for decoding the inversely cryptographically processed message.

46. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the digital message contains a request for implementing a prescribable action, the apparatus further comprising:

- means for implementing the prescribable action to obtain a result of the prescribable action, the means for implementing being provided in the second computer unit; and

- means for sending the result of the prescribable action to the first computer unit, the means for sending being provided in the second computer unit.

47. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the digital message contains a request for implementing a prescribable action, the apparatus further comprising:

- means for implementing the prescribable action to obtain a result, the means for implementing being provided in the second computer unit;

- means for forming a reply message that contains the result of the prescribable action, the means for forming a reply message being provided in the second computer unit;

- means for encoding the reply message according to the encoding format of the network protocol to form an encoded reply message, the means for encoding the reply message being provided in the second computer unit;

- means for processing the encoded reply message with at least one cryptographic process to form a cryptographically processed encoded reply message, the means for processing the encoded reply message being provided in the second computer unit;

- means for storing the cryptographically processed encoded reply message, the means for storing being provided in the second computer unit;

- means for forming and encoding a fetch message according to the encoding format of the network protocol wherein the cryptographically processed encoded reply message is requested from the second computer unit, the means for forming and encoding a fetch message being provided in the first computer unit;

- means for sending the fetch message from the first computer unit to the second computer unit, the means for sending the fetch message being provided in the first computer unit;

- means for receiving the fetch message, the means for receiving the fetch message being provided in the second computer unit;

- means for encoding the cryptographically processed reply message requested in the fetch message according to the encoding format of the network protocol, the means for

encoding the cryptographically processed reply message being provided in the second computer unit; and

means for sending the encoded, cryptographically processed reply message from the second computer unit to the first computer unit, the means for sending the encoded, cryptographically processed reply message being provided in the second computer unit.

48. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the digital message contains a request for implementing a prescribable action, the apparatus further comprising:

means for implementing the prescribable action to obtain a result of the prescribable action, the means for implementing the prescribable action being provided in the second computer unit;

means for forming a reply message that contains the result of the prescribable action, the means for forming the reply message being provided in the second computer unit;

means for encoding the reply message according to the encoding format of the network protocol to form an encoded reply message, the means for encoding the reply message being provided in the second computer unit;

means for processing the encoded reply message with at least one cryptographic process to form a cryptographically processed encoded reply message, the means for processing the encoded reply message being provided in the second computer unit;

means for encoding the cryptographically processed encoded reply message according to the encoding format of the network protocol to form an encoded, cryptographically processed encoded reply message, the means for encoding the cryptographically processed encoded reply message being provided in the second computer unit; and

means for sending the encoded, cryptographically processed encoded reply message from the second computer unit to the first computer unit, the means for sending the encoded, cryptographically processed encoded reply message being provided in the second computer unit.

49. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 47, wherein the cryptographically processed reply message is stored in a management information base.

Claims 50 and 51 (cancelled)

52. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the network protocol is a simple network management protocol version 1.

53. (cancelled)

54. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41, wherein the network protocol is a simple network management protocol version 1, and wherein the means for encoding the cryptographically processed message is configured such that a set request is formed upon the encoding of the cryptographically processed message.

55. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 47, wherein the means for forming and encoding the fetch message is configured such that a get request is formed, and wherein the means for encoding the cryptographically processed reply message requested in the fetch message is configured such that a get response is formed.

56. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 41,
wherein the digital message contains at least one of an information query and an information particular of the second computer unit in a request for implementing a prescribable action.

57. (previously presented) An apparatus for encoding, transmitting and decoding a digital message as claimed in claim 56, wherein the means for cryptographically processing the encoded message, the means for encoding the cryptographically processed message and the means for sending the encoded cryptographically processed message are formed together as a first proxy agent, and wherein the means for receiving the encoded cryptographically processed message, the means for decoding the encoded cryptographically processed message and the means for inversely cryptographically processing the decoded cryptographically processed message are formed together as a second proxy agent.

Claims 58 and 59 (cancelled)

60. (currently amended) A communication system having a manager of a communication network and an intermediate manager of a communication network, the communication system employing the communication network and offering further services that proceed beyond services offered by the communication network to customers, the communication system including an apparatus for encoding, transmitting and decoding a digital message, the apparatus comprising:

a first computer unit, including means for encoding the digital message via employment of an encoding format of a network protocol by a first application to form an encoded message, means for cryptographically processing the encoded message, without decoding the encoded message, to form a cryptographically processed message by a first proxy agent, means for encoding the cryptographically processed message via employment of the encoding format of the network protocol to form an encoded, cryptographically processed message, and means for sending the encoded cryptographically processed message from the first computer unit; and

a second computer unit, including means for receiving the encoded cryptographically processed message from the first computer unit, means for decoding the encoded cryptographically processed message according to the encoding format of the network protocol to form a decoded cryptographically processed message, means for inversely cryptographically processing the decoded cryptographically processed message by a second proxy agent to form an inversely cryptographically processed message, and means for decoding the inversely cryptographically processed message by a second application according to the encoding format of the network protocol.

Claims 61-62 (cancelled)

63. (new) At least one computer-readable medium encoded with a computer program that when executed causes at least one computer to perform a method comprising:

encoding the digital message via employment of an encoding format of a network protocol by an application to form an encoded message;

cryptographically processing the encoded message, without decoding the encoded message, to form a cryptographically processed message by a proxy agent; and

encoding the cryptographically processed message via employment of the encoding format of the network protocol used to produce the encoded message.

64. (new) At least one computer-readable medium as claimed in claim 63, wherein the network protocol is a simple network management protocol version 1.

65. (new) At least one computer-readable medium as claimed in claim 64, said encoding of the cryptographically processed message includes forming a set request.

66. (new) At least one computer-readable medium encoded with a computer program that when executed causes a computer to decode an encoded, cryptographically processed message that is present in an encoding format of a network protocol by performing a method comprising:

- receiving the encoded, cryptographically processed message from a first computer unit;
- decoding the encoded, cryptographically processed message according to the encoding format of the network protocol to form a decoded, cryptographically processed message;
- inversely cryptographically processing the decoded, cryptographically processed message by a proxy agent to form an inversely cryptographically processed message; and
- decoding the inversely cryptographically processed message by an application according to the encoding format of the network protocol.

67. (new) At least one computer-readable medium as claimed in claim 66, wherein the network protocol is the simple network management protocol version 1.

68. (new) At least one computer-readable medium encoded with a computer program that when executed causes a method for encoding a digital message to be performed by at least one computer in a communication system having a manager and an intermediate manager of a communication network, the communication system employing the communication network and offering further services that proceed beyond services offered by the communication network to customers, said method comprising:

- encoding the digital message via employment of an encoding format of a network protocol by an application to form an encoded message;
- cryptographically processing the encoded message, without decoding the encoded message, to form a cryptographically processed message by a proxy agent; and
- encoding the cryptographically processed message via employment of the encoding format of the network protocol used to produce the encoded message.

69. (new) At least one computer-readable medium encoded with a computer program that when executed causes a method for decoding an encoded, cryptographically processed message that is received in an encoding format of a network protocol to be performed by at least one computer in a communication system having a manager and an intermediate manager of a communication network, the communication system employing the communication network and offering further services that proceed beyond services offered by the communication network to customers, said method comprising:

- receiving the encoded, cryptographically processed message from the computer unit;
- decoding the encoded, cryptographically processed message according to the encoding format of the network protocol to form a decoded, cryptographically processed message;
- inversely cryptographically processing the decoded, cryptographically processed message by a proxy agent to form an inversely cryptographically processed message; and
- decoding the inversely cryptographically processed message by an application according to the encoding format of the network protocol.

70. (new) An apparatus for encoding a digital message, the apparatus comprising:
a programmed processor encoding the digital message via employment of an encoding format of a network protocol by an application to form an encoded message, cryptographically processing the encoded message, without decoding the encoded message, to form a cryptographically processed message by a proxy agent, and encoding the cryptographically processed message via employment of the encoding format of the network protocol used to produce the encoded message.

71. (new) An apparatus as claimed in claim 70, wherein the network protocol is simple network management protocol version 1.

72. (new) An apparatus as claimed in claim 71, wherein said programmed processor further produces a set request upon the encoding of the cryptographically processed message.

73. (new) An apparatus for decoding an encoded, cryptographically processed message that is present in an encoding format of a network protocol and is received from a computer unit, said apparatus comprising:

an interface receiving the encoded, cryptographically processed message from the computer unit; and

a programmed processor, coupled to the interface, decoding the encoded, cryptographically processed message according to the encoding format of the network protocol to form a decoded, cryptographically processed message, inversely cryptographically processing the decoded, cryptographically processed message by a proxy agent to form an inversely cryptographically processed message, and decoding the inversely cryptographically processed message by an application according to the encoding format of the network protocol.

74. (new) An apparatus as claimed in claim 73, wherein the network protocol is the simple network management protocol version 1.

75. (new) A communication system having a manager of a communication network and an intermediate manager of a communication network, the communication system employing the communication network and offering further services that proceed beyond services offered by the communication network to customers, the communication system including an apparatus for encoding a digital message which comprises:

a programmed processor encoding the digital message via employment of an encoding format of a network protocol by an application to form an encoded message, cryptographically processing the encoded message, without decoding the encoded message, to form a cryptographically processed message by a proxy agent, and encoding the cryptographically processed message via employment of the encoding format of the network protocol used to produce the encoded message.

76. (new) A communication system having a manager of a communication network and an intermediate manager of a communication network, the communication system employing the communication network and offering further services that proceed beyond services offered by the communication network to customers, the communication system including an apparatus for decoding an encoded, cryptographically processed message that is received in an encoding format of a network protocol from a computer unit, the apparatus comprising:

an interface receiving the encoded, cryptographically processed message from the computer unit; and

a programmed processor decoding the encoded, cryptographically processed message according to the encoding format of the network protocol to form a decoded, cryptographically

processed message, inversely cryptographically processing the decoded, cryptographically processed message by a proxy agent to form an inversely cryptographically processed message, and decoding the inversely cryptographically processed message by an application according to the encoding format of the network protocol.